



DOCKET NO: 249700US2S DIV

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

RE APPLICATION OF :
HIDEO ANDO, ET AL. : EXAMINER: NGUYEN, H.
SERIAL NO: 10/800,759 :
FILED: MARCH 16, 2004 : GROUP ART UNIT: 2621
FOR: INFORMATION STORAGE :
SYSTEM CAPABLE OF RECORDING
AND PLAYING BACK A PLURALITY OF
STILL PICTURES

APPEAL BRIEF

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicants appeal the outstanding Final Rejection of May 30, 2007, finally rejecting Claim 16.

I. REAL PARTY IN INTEREST

The above-noted application is assigned to Kabushiki Kaisha Toshiba., which is the real party in interest, having a place of business at Kanagawa-Ken, Japan.

II. RELATED APPEALS AND INTERFERENCES

Application Serial Nos. 10/802,004 and 10/175,402 are also under appeal. 11/23/2007 JAND01 00000015 10000759
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Application Serial Nos. 10/802,004 and 10/175,402 have the same assignee, one common inventor, and are being examined by the same examiner. Finally, Application Serial Nos. 10/802,004 and 10/175,402 also include at least one claim rejected under 35 U.S.C. §101.

III. STATUS OF CLAIMS

Claims 16-19 are pending in this application. Claims 1-15 are canceled. Claims 17-19 are allowed. The rejection of Claim 16 is being appealed.

IV. STATUS OF AMENDMENTS

No amendments after final rejection were filed.

V. SUMMARY OF CLAIMED SUBJECT MATTER¹

Claim 16 is directed toward an information storage embodied as a recordable optical disc for use with an optical disc drive. Claim 16 is generally supported by Figure 1 (a view explaining the structure of a regrettable optical disc 1001).

Claim 16 recites,

An information storage medium embodied as a recordable optical disc for use with an optical disc drive, wherein the recordable optical disc physically comprises a lead-in area 1002 located near a center of rotation of the disc (page 9, line 26 to page 10, line 3), and a data area 1004 located outside of the lead-in area, said data area recording information including management information including still picture VOB group information (S_VOGI, page 43, lines 13-17 and Figure 12), and still picture information (page 11, line 7 to page 12, line 4), said recordable optical disc including sectors for storing recorded information, said recordable optical disc comprising:

a first recording area recording audio information of an additional audio group (RTR_STA.VRO, page 86, lines 8-12 and Figure 36) and the still picture information

¹ It is Appellants' understanding that, under the rules of Practice before the Board of Patent Appeals and Interference, 37 C.F.R. § 41.37(c) requires that a concise explanation of the subject matter recited in each independent claim be provided with reference to the specification by page and line numbers and to the drawings by reference characters. However, Appellants' compliance with such requirements anywhere in this document should in no way be interpreted as limiting the scope of the invention recited in all pending claims, but simply as non-limiting examples thereof.

(RTR_STO.VRO, page 86, lines 8-12 and Figure 36), the still picture information including a still picture video object group (Still Picture Video Object Group #2, Figure 36) having at least one still picture video object (Video Part, Figure 36); and

a second recording area recording still picture additional audio file information (S_AAFI, page 79, lines 3-15 and Figure 12) and the still picture VOB group information (S_VOGL, page 43, lines 13-17 and Figure 12),

said still picture additional audio file information including start address information of the additional audio group (S_AAG_SA, page 79, line 27 to page 80, line 4 and Figure 28),

the still picture VOB group information (S_VOGL, page 43, lines 13-17 and Figure 12) managing a corresponding still picture video object group (Still Picture Video Object Group #2, Figure 36) and including,

still picture VOB entry type information including a temporary erase flag (TE, page 81, line 26 to page 82, line 1) indicating whether the corresponding still picture video object is in a temporarily erased state, and

video part size information (V_PART_SZ, page 82, lines 5-6 and Figure 32) indicating a size of a video part of the corresponding still picture video object,

wherein a recording and/or reproducing apparatus accesses the still picture VOB group information of the second recording area to reproduce the still picture information (page 106, lines 2-20).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection being appealed are whether Claim 16 is directed to patentable subject matter as defined by 35 U.S.C. §101.

VII. ARGUMENTS

35 U.S.C. §101 states

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereon, may obtain a patent therefor, subject to the conditions and requirements of this title.

When interpreting this statute, the Supreme Court has established that the legislative history is relevant. In *Diamond v. Chakrabarty*, 447 U.S. 303 (1980), the Supreme Court interpreted 35 U.S.C. §101 in light of the legislative history. The Supreme Court noted that Congress had intended patentable subject matter to "include anything under the sun that is made by man."

While this language from the legislative history does not appear in the statute, it shows the intent of Congress (which has already been appreciated by the Supreme Court²) that 35 U.S.C. §101 be interpreted broadly. Particularly, the legislative history shows that the words "any" in the statute denote that patentable subject matter should be viewed broadly.

However, 35 U.S.C. §101 is not without bounds. The Federal Circuit in *In re Lowry*³ established that claims directed to a data structure are statutory subject matter when there is a functional relationship between the data structure and a storage medium. The court in *Lowry* recognized that a "data structure" is "a **physical** implementation of data model's organization of the data."⁴

Claim 1 in *Lowry*, which was found to be directed to patentable subject matter, recites

A memory for storing data for access by an application program being executed on a data processing system, comprising: a data structure stored in said memory....

The body of *Lowry*'s Claim 1 describes a specific management relationship. *Lowry*'s data structure stores information used by an application program being stored on a data processing

² See, *Diamond v. Diehr*, 450 U.S. 175, 193 (1981) in addition to *Chakrabarty*.

³ 32 F.3d 1579 (Fed. Cir. 1994).

⁴ *Lowry*, at 1580 (emphasis added).

system. The data structure includes a plurality of attribute data objects and their specific hierarchical and non-hierarchical relationships. Particularly, *Lowry's* Claim 1 describes a pyramidal arrangement of hierarchically arranged attribute data objects, having non-hierarchical relationships with other attribute data objects. The attribute data objects contain information used by the application program as well as information regarding its interrelationships with other attribute data objects.⁵

The Federal Circuit noted that

Lowry's [attribute data objects] ADOs do not represent merely underlying data in a database. ADOs contain both information used by application programs and information regarding their physical interrelationships with a memory. Lowry's claims dictate how application programs manage information. Thus, Lowry's claims define functional characteristics of the memory.⁶

Like the claims considered in *Lowry*, Applicants' Claim 16 is directed to an information storage embodied as a recordable optical disc for use with an optical disc drive, the data including *management* information (still picture VOB group information) and still picture information. Thus, Claim 16 and the claims in *Lowry* are both directed to a physical medium storing a data structure in which a specific management relationship is realized by an optical disc drive (or data processing system in *Lowry's* Claim 14).

Particularly, Claim 16 describes a data area storing audio information of an additional audio group and the still picture information. The still picture information includes a still picture video object group having at least one still picture video object. The management information includes still picture additional audio file information and still picture VOB group information. The still picture additional audio file information includes start address information of the additional audio group. The still picture VOB group information manages a corresponding still picture video object group. The still picture VOB

⁵ *Lowry*, at 1580, 1581, and 1584.

⁶ *Lowry*, at 1583.

group information includes still picture VOB entry type information including a temporary erase flag indicating whether the corresponding still picture video object is in a temporarily erased state and video part size information indicating a size of a video part of the corresponding still picture video object. Thus, the *management* information recited in Claim 16 is functional descriptive material which pertains to the organization of formatted information stored on the information storage medium. Further, Claim 16 recites that a recording and/or reproducing apparatus accesses the still picture VOB group information of the second recording area to reproduce the still picture information. Consequently, Claim 16 provides a functional interrelationship between the data structure, the information storage medium, and the information recording/reproducing apparatus.

The Final Rejection mailed May 30, 2007 justifies the rejection of Claim 16 under 35 U.S.C. §101 by stating

Since the medium do not provide any functional interrelationship to the medium for controlling the medium to access the information from the medium or impart to any software and hardware structural components to perform a function that is processed by a computer, the information themselves can not make them statutory.

However, this conclusory statement provides no analysis by Office with respect to *Lowry*. Further, the Office has cited no alternative authority to support this naked assertion.

Claim 16 is directed toward a physical medium encoded with a data structure used by an optical disk drive. The data structure includes information regarding the functional interrelationships within the physical medium and dictates how the optical disk drive manages information.

Thus, Claim 16 satisfies the requirements set forth by the Federal Circuit in *Lowry*, and is therefore directed toward patentable subject matter.

Furthermore, Claim 16 is different than the claim considered in *In re Wamerdam*,⁷ which included a claim directed toward a method for generating a data structure. Claim 16 is not directed toward a method of generating a data structure. Rather, Claim 16 is directed to an information storage medium, which emphasizes the physical nature of the data structure. Claim 16 is much closer to the claims at issue in *Lowry*, and should be considered to be directed to patentable subject matter based on the rationale put forward in *Lowry*.

Moreover, the Board of Appeals and Patent Interferences (“Board”) in *Ex parte Nuijten*⁸ reversed the Examiner’s rejection under 35 U.S.C. §101 that a storage medium storing a signal is nonstatutory subject matter. Claim 15 of the 09/211,928 application recites:

A storage medium having stored thereon a signal with embedded supplemental data, the signal being encoded in accordance with a given encoding process and selected samples of the signal representing the supplemental data, and at least one of the samples preceding the selected samples is different from the sample corresponding to the given encoding process.

The Board noted that Claim 15 is not trying to claim a signal, and that the storage medium puts Claim 15 into “the statutory category of ‘manufacture’ and that the signal is functional because it can be used by a machine to produce a useful result, as with the data structure stored in memory in *Lowry*.”⁹

Similar to Claim 15 in *Ex Parte Nuijten* (and the claim at issue in *Lowry* that was cited by the Board with approval), Claim 16 of the present application is directed toward an information storage medium that includes a data structure. The data structure is functional because it can be used by a machine to produce a useful result (i.e., the recording/reproducing apparatus recited in Claim 16).

⁷ 33 F.3d 1354 (Fed. Cir. 1994).

⁸ Appeal Number 2003-0853

⁹ *Id.*, at page 14.

The Final Rejection mailed May 30, 2007 further states that the interrelationships between the data structure and a computer hardware and software components is not recited in Claim 16. However, as noted above, Claim 16 recites that a recording and/or reproducing apparatus accesses the still picture VOB group information of the second recording area to reproduce the still picture information. Therefore, it is respectfully submitted that at least this portion of Claim 16 defines the interrelationships between the data structure and computer hardware and software components. Thus, it is again respectfully submitted that Claim 16 defines statutory subject matter.

VIII. CONCLUSION

For the foregoing reasons, Applicants respectfully submit that Claim 16 complies with the requirements of 35 U.S.C. §101 and is directed toward statutory subject matter.

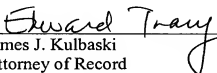
Respectfully submitted,

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VIII. CLAIMS APPENDIX

Claims 1-15 (Canceled).



Claim 16: An information storage medium embodied as a recordable optical disc for use with an optical disc drive, wherein the recordable optical disc physically comprises a lead-in area located near a center of rotation of the disc, and a data area located outside of the lead-in area, said data area recording information including management information including still picture VOB group information, and still picture information, said recordable optical disc including sectors for storing recorded information, said recordable optical disc comprising:

a first recording area recording audio information of an additional audio group and the still picture information, the still picture information including a still picture video object group having at least one still picture video object; and

a second recording area recording still picture additional audio file information and the still picture VOB group information,

said still picture additional audio file information including start address information of the additional audio group,

the still picture VOB group information managing a corresponding still picture video object group and including,

still picture VOB entry type information including a temporary erase flag indicating whether the corresponding still picture video object is in a temporarily erased state, and

video part size information indicating a size of a video part of the corresponding still picture video object,

wherein a recording and/or reproducing apparatus accesses the still picture

VOB group information of the second recording area to reproduce the still picture information.

Claim 17: An information recording method for recording still picture information on an information storage medium, the information storage medium including,

a first recording area recording audio information of an additional audio group and the still picture information, the still picture information including a still picture video object group having at least one still picture video object; and

a second recording area recording still picture additional audio file information and still picture VOB group information,

said still picture additional audio file information including start address information of the additional audio group,

the still picture VOB group information managing a corresponding still picture video object group and including,

still picture VOB entry type information including a temporary erase flag indicating whether the corresponding still picture video object is in a temporarily erased state, and

video part size information indicating a size of a video part of the corresponding still picture video object,

the information recording method comprising:

generating the still picture information;

recording the generated still picture information in the first recording area;

generating the still picture VOB group information; and

recording the generated still picture VOB group information in the second

recording area.

Claim 18 (Currently Amended): An information reproducing method for reproducing still picture information recorded on an information storage medium, the information storage medium including,

a first recording area recording audio information of an additional audio group and the still picture information, the still picture information including a still picture video object group having at least one still picture video object; and

a second recording area recording still picture additional audio file information and still picture VOB group information,

said still picture additional audio file information including start address information of the additional audio group,

the still picture VOB group information managing a corresponding still picture video object group and including,

still picture VOB entry type information including a temporary erase flag indicating whether the corresponding still picture video object is in a temporarily erased state, and

video part size information indicating a size of a video part of the corresponding still picture video object,

the information reproducing method comprising:

reproducing the still picture information recorded in the first recording area based on the still picture VOB group information recorded in the second recording area.

Claim 19: An information reproducing apparatus for reproducing still picture

information recorded on an information storage medium, the information storage medium including,

a first recording area recording audio information of an additional audio group and the still picture information, the still picture information including a still picture video object group having at least one still picture video object; and

a second recording area recording still picture additional audio file information and still picture VOB group information,

said still picture additional audio file information including start address information of the additional audio group,

the still picture VOB group information managing a corresponding still picture video object group and including,

still picture VOB entry type information including a temporary erase flag indicating whether the corresponding still picture video object is in a temporarily erased state, and

video part size information indicating a size of a video part of the corresponding still picture video object,

the information reproducing apparatus comprising:
a reproducer configured to reproduce the still picture information in the first recording area based on the still picture VOB group information recorded in the second recording area.

IX. EVIDENCE APPENDIX

None.

Application Serial No. 10/800,759
Appeal Brief filed herewith

X. RELATED PROCEEDINGS APPENDIX

None.